

# SPORTS

## Everything was decided by the parachute event

Galina Churkina of Leningrad has retained her title of absolute national champion in parachute jumping at the USSR championship which recently ended in Minsk. The competition was still, with a large group of contestants. After the first three events—winning, shooting, and cross-country—Galina Churkina was not yet in the lead. However, with a brilliant performance in the last event in

the programme—precision parachute landing—the Ukrainian athlete shot to the lead. The second and third places went to Valentina Tkach and Tatiana Burdakovskaya, both of Moscow.

In the men's competition last year's absolute champion Yevgeny Pukoshin of Bryansk gave way to the new champion (a long-standing rival), Vladimir Bogdanov, also of Bryansk. The bronze medal went to Sergei Chalko of Minsk.

In the team event, the podium went to Moscow female athlete and men from the Russian Federation.

## Impressive draws in the world title contests

(Continued from page 11)

quick in hand. The game full of urgency ended in a tie.

In the second game, in which Kasparov played White, the contestants battled in the new Indian Defence. It was a long story. Yet, we can only say that the initiative in the game passed from one player to the other several times. Shortly before the game was adjourned Kasparov's advantage was overwhelming. However, having exceeded his time, he reduced his superiority considerably. Yet, on the next day when the game resumed, the defender played a confident

game, carrying it to another draw.

This means we are yet to see more of the match.

In the women's match between two Soviet Grandmasters—twice world champion Lina Chiburdanidze and Irina Levitina in Volgograd, the score after two games stands at 1-1. Unlike the men's championship the number of games here is limited to 16 and the draws are counted in. The winner will be the first to win more than half of the number of points, i.e., 8.5. If the score is 8-8, Chiburdanidze will retain her title.

Viktor BABKIN, chess observer

## FAMILY TOURISM

Painted is the Zoln family who are employed at the Melio in Moscow. Mother, father, and their three-year-old son Kolya are enthusiastic about travelling, and meticulously every Sunday, let alone summer holidays, they go

on journeys out of town. They were pleased to enter the competition for the mastery and speed in pitching tents, making a fire and crossing rivers and other obstacles, and to share experiences. This competition was

arranged by the Sokolniki park. People of different age groups and professions have also entered for the competition whose youngest participant was Kolya.

Photo by Alexander Rybkovskiy



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## Canada and Sweden for the finals

In the second semi-finals in the Canada Cup, the Soviet team lost 2-3 to the hosts during extra time.

The rule is that if the game is drawn after the main 60 minutes, the winner in the semifinal and final series is the team that scores first during extra time.

From the very first minutes it became clear that the "elimination principle" had left its mark on the games of the two teams. Soviet players failed to take advantage of several favourable situations: they either missed or shot straight at the goal.

The Canadians also had something to complain about. Soviet goalie, for Myshkin repulsed all their attacks in the first round. During the second round, the Maple Leafs played with such enthusiasm, at such speed and with so many imaginative combinations as had not been seen in the earlier matches. They stormed the Soviet posts 17 times as against only six such threatening moves by the Soviet team. When the Canadians still held the upper hand one of these attacks ended with Tonnell scoring a goal.

In evaluating the third round, it should be said that those twenty minutes showed that the Soviet team's traditions had been preserved despite the shift in the generations and silence from the team of world-famous players. The team showed stamina and sense of purpose. At first, Svetlov, who by the first time played the entire tournament from the beginning to the end, equalized the score. After that, Makarov, recognized as the best player in the Soviet team during the Cup, made an

other direct hit. Other players, who then had several opportunities to utilize this advantage failed.

In a scuffle outside the Soviet goal, Wilson was the first to see the puck which shot off Gretzky's stick to make the score 2-2.

It was the first time that the Soviet team played in a situation of "up to one goal" rule. Although both goalies put up their best performance in the extra time, the Canadian forward, Buss, managed to send the puck past Myshkin.

It was a difficult tournament. Even before the start emergency situations cropped up one after another, making the coaches find new players. Drozdetskiy and Feller were unable to go to Canada, and Tyumeney had to be replaced at the last minute. Serious injuries were sustained by Ilyayevichinov, Parovkin, Larinov, Kovin, Svetlov and Stelnov during the contests. However, they all showed up at subsequent games, realizing that their team needed them.

The Canada Cup championship is a serious sporting event and all the participants have brought here many new techniques, said the chief coach of the USSR team, Viktor Tikhonov. Today, the standards in international hockey have grown much higher than they used to be.

In the three-game final series, the two contestants will be Canada and Sweden. It is the first time that the Scandinavians have reached the decisive stage of the championship; they did so by beating the US team 9-2. Their success has created quite a sensation in Sweden from where we have an interesting report that the Swedish television has decided to make live coverage of the matches even though they will be played in the pre-drawn hours European time.

## A big day for soccer

Last Wednesday was a day for important football matches in many European countries. Five elimination matches were played in the world championship whose final games will be held in Mexico in 1986. There were five friendly games which also provided good training for the future and decisive matches.

Two games were played in group 6. Northern Ireland beat USSR in Dublin with a home goal scored by Walsh.

Norway and Switzerland met in Oslo where the 1-0 Swiss victory looked quite logical. Egil made a good penalty kick in the 4th minute. Denmark, USSR, Ireland and Switzerland will fight for two candidatures to Mexico.



A tense moment in the final game between Sweden and the United States.

## USSR and Finland expanding sports contacts

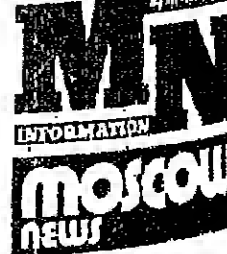
Marij Gannoe, Chair of the Sports Committee of the USSR and Chairman of the Soviet Olympic Committee, has stressed that the USSR has reached a "Committee of Helsinki" with the Finnish Olympic Committee. During talks the two sides expressed satisfaction with the development of Soviet-Finnish cooperation in sports and the prospects for expanding mutually advantageous relations between the two countries.

Tournaments and other negotiations have been held at all levels. Last week the USSR and Finland exchanged a letter of exchange of sports. For example, last June 1 figure skaters from the USSR Olympic champions visited Lyondale, Minnesota.

During the first six of 1984 alone Soviet and Finnish athletes held 31 joint sessions.

During the talks representatives of the two countries' National Committees reached their determination to strengthen the ties between the USSR and Finland to be active participants in the Olympic movement. It is their aim to attempt by the year 2000 to create a joint team of Soviet and Finnish athletes to take part in the Olympic Games.

They stressed the need to increase the role of sports in the Association of Soviet and the Association of Nordic states in the International Olympic Committee.



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MN INFORMATION No. 11

## UN General Assembly session opens

New York, September 18. The 39th session of the UN General Assembly opened today. The agenda contains 10 items reflecting the political complexity of the world. The delegates will discuss as a matter of principle the removal of the threat of nuclear war, making health, disarmament, and international political cooperation a priority.

The USSR resolutely speaks in favour of enhancing the UN role in eliminating the dangers of nuclear war, in the Middle East, in Central America, in southern Africa and in other "hot spots" on the globe. In favour of asserting the principle of inadmissibility of threat or use of force in interstate relations, in favour of making stronger confidence among countries and peoples, for providing favourable conditions for socio-economic progress of all nations.

International cooperation has been won by the UN. The UN has been guided in their work by the principle of mutual agreement and respect for the rights of all peoples.

Adopting a resolution, the UN General Assembly has decided to undertake a study to make use of nuclear energy for peaceful purposes. The USSR programme of peaceful nuclearization is a model for other states.

There is no such thing as a free lunch. The USSR programme of peaceful nuclearization is a model for other states.

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## Billy Graham: we must work together for salvation of mankind

Everybody I have been introduced to in this country, everybody I talked to, talked to me about peace, said the American Evangelist Billy Graham, to journalists at the Vinn Hotel in Tallinn.

He has visited Tallinn, the capital of Estonia, as one of the four cities on his programme during his stay in the Soviet Union. In Tallinn, Rev. Graham addressed congregations in the Church of Olavika and Alexander Nevsky Cathedral.

Molotovskian Aleksey of Tallinn and Gdovskaya spoke about the need for peace and I hope and pray that we can all work together for the salvation of mankind. The leaders of the Baptist community also spoke about peace.

## King Hussein: Arab countries don't trust USA

Amman, King Hussein of Jordan has told the American CNN TV that the United States needs data material, military, political and moral support to Israel which occupies Arab territories and puts forward claims on them. It has become Israel's strategic ally.

We can say with confidence that the USA has lost the trust of Arab countries as well as the trust needed to participate in the Middle East settlement process. The King emphasized.

Tonching on the policy of the USSR to the Middle East, the head of the Jordan state said it was noted for its steady character, which cannot be said of the policy pursued by the USA that is subject to frequent changes. King Hussein pointed out once again that a just and comprehensive solution to the Middle East problem is impossible without the Soviet Union as an interested party.



Entrusted by the theatre world. Photo by Viktor Akhilev



Billy Graham will next visit Novosibirsk, then Moscow. Text and photo by Vladimir BRODETSKY

## ASSITEJ Assembly in Moscow



For the first time the 8th General Assembly of the International Association for Children's and Youth Theatres (ASSITEJ) will take place in Moscow from September 20 to 26.

The ASSITEJ was set up in 1956. Soviet children's theatre workers were among its sponsors from the very beginning and have since been enthusiastic participants in its activities, including meetings of actors.

exchange of experience, sending children's theatre companies to international festivals, and information publishing. Natalya Sals, chief art and managing director of the children's musical theatre, is the president of the Soviet ASSITEJ centre.

ASSITEJ assemblies are held once in every three years, the latest of which took place in Lyons, France. Delegates from almost 40 countries will participate in the next forum. The programme includes reports by national ASSITEJ centres in the USSR, France and Mexico on the role of children's and youth theatres in bringing up the younger generation in the spirit of peace, humanism and progress. The working commissions will discuss the problems of contemporary dramatic art, the role of art directors in making productions significant of children's theatre and ways of popularizing its art.

The assembly participants will also learn about cultural life in Moscow and see performances in children's theatres in Moscow, Leningrad, Riga, Yerevan, Tbilisi, Saratov and other Soviet cities. They will also see productions for children prepared by adult theatres. An exhibition "The Multicultural Soviet Theatre for Children" will be organized in the all-Russia museum of dramatic, applied and folk arts.

### FACTS AND EVENTS

● The Spanish Foreign Minister Fernando Morán has spoken in favour of Spain withdrawing from the NATO Military Committee, the supreme military body of the North Atlantic Organization which comprises chiefs of staff of all the NATO countries with the exception of France. It was difficult to see how Spain could maintain that it does not belong to NATO's military organization while it remained a member of its Military Committee, he said in an interview with the Spanish magazine, "Tempe". F. Morán also supported the proposals for the establishment of nuclear-free zones, noting that they would promote equilibrium in East-West relations.

## Imperialist plans to seize the sea bed

Law and order in the international area of the sea had not in the World Ocean in general can only be secured through strict implementation of provisions of the Convention and decisions adopted by the UN Conference on the Law of the Sea, says TASS in a statement on the signing in Geneva of the so-called provisional agreement on the deep sea areas of the sea bed signed by the United States, Great Britain, West Germany, Italy, Belgium, France, Japan and the Netherlands.

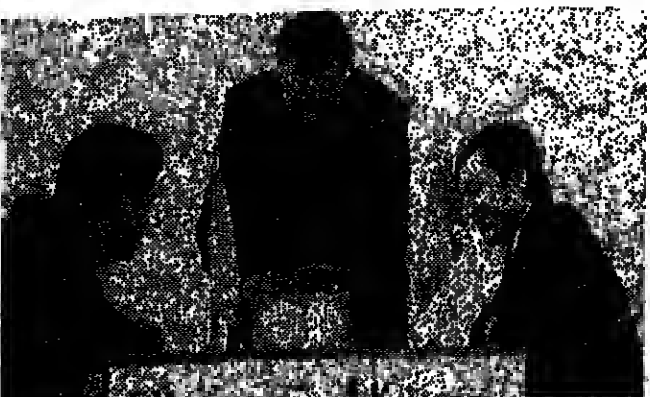
The conclusion of this agreement constitutes an attempt to legalize the desire on the part of a number of imperialist monopolies to seize and divide among themselves the most promising

(Continued on page 2)

## GROWING SUSPENSE IN THE WORLD TITLE MATCHES

● Contender Gari Kasparov takes his first time-out.  
● Co-ordinator Irina Levitina breaks the draw.

A score has been registered in one of the two matches in the world chess championships going on in Moscow and Volgograd. It happened in Volgograd, where the chess crown is being contested by twice world champion Maya Chiburdanidze and Irina Levitina of Leningrad. The first two games ended in a draw, and in the view of many specialists, the first one was



At the world title match between Anatoly Karpov (right) and Gari Kasparov (left), in the centre, chief referee Svetozar Gligoric opens an envelope with the recorded move for the resumption of the adjourned second game. Photo by Boris Kaufman

marked by a degree of imprecision and even mistaken solutions from both sides, while the other ended at a point when the formidable champion from Tbilisi expected to gain a more favourable result than mere half a point. The third game, played on September 16, was adjourned at the 41st move, with the contestants having equal material. However, the experienced co-ordinator, who played White, had a positional superiority. She was able to show that she can take advantage of this superiority. After the 73rd move, Chiburdanidze conceded defeat.

The score is now 2-1 in Levitina's favour. Let me remind you that she has a score at least 8.5 points to win the 16-game match, or more than half of the games, but the champion needs 8-8 draw to retain the title.

Though starting their match a day later, Chiburdanidze and Levitina have overtaken Irina

(Continued on page 2)







### Round the Soviet Union

WORK HAS BEGUN ON THE KRIVOY ROG SUPERDEEP BOREHOLE WHICH WILL EVENTUALLY REACH THE DEPTH OF 12,000 METRES. Scientists expect to obtain a better knowledge of the evolution and structure of the Earth's crust. It will improve the accuracy of locating metal areas in the region.

TOURISTS FROM MANY COUNTRIES OF THE COUNTRY RECENTLY SPENT A DAY ON A SHORE OF AN ISLAND IN THE FRANTZ JOSEF ARCHIPELAGO, IN THE ARCTIC OCEAN. They were on a pleasure cruise aboard the "Klavdiya Yslanskaya". This route is operative only once a year, in September. In the course of 20 days they will visit many Arctic islands and such cities as Oudinsk, Murmansk, Arkhangelsk, and enjoy the sight of the Solovkiy Islands with their famous architectural monuments.

THE SIPHON ACROSS THE KAMA RIVER MEANT TO CONNECT TWO STRETCHES OF THE URBAN-CENTRE-2 PIPELINE HAS BEEN COMPLETED. This is the third such project near the town of Sarapul. Its length and diameter being considerably greater than those of the previous siphons crossing the river.

### Fifth hydro on Vakhsh River

Assembly operations have begun on the first power unit of the Belpaznaskaya hydroelectric station. This 600,000-kilowatt hydro is the fifth on the Vakhsh River in Tajikistan, Central Asia. When the Belpaznaskaya and the sixth Vakhsh hydro—the 3,600 megawatt Rogun plant—are completed, Tajikistan will become the biggest electric energy producer in Soviet Central Asia. Next comes comprehensive development of the Pyandzh River where thirteen hydroes can be built.

### FROM THE SOVIET PRESS

#### NUCLEAR ENERGY: ASSISTANCE AND COOPERATION

This year the Soviet Union has marked the 30th anniversary since the first nuclear power station was built. All through that period, EKONOMICHESKAYA GAZETA writes, the Soviet Union has been offering its experience in this field to other countries.

Thus, in 1964, a 210-megawatt power unit was launched at the Novovoronezhskoye power station, and in two years time a similar unit was built with Soviet help at the Belenezh nuclear project in the GDR. In 1971, the Soviet Union switched over to a new series of reactors, the water-moderated reactors of the 440 type, and with minimal delay each reactor appeared in the GDR, Bulgaria, and later, in Czechoslovakia and Hungary. These reactors continue to be built in the above named countries and in Poland and Cuba. Recently water-moderated reactors with a capacity of 1,000 megawatts have been built in this country on a broad basis, and soon nuclear power projects based around each reactor will appear in Bulgaria, the GDR and Czechoslovakia. Other socialist countries also plan to build similar stations.

The aggregate installed power of all nuclear facilities operating in the socialist countries has reached 28,000 megawatts, saving 80 million tonnes of fuel equivalent a year.

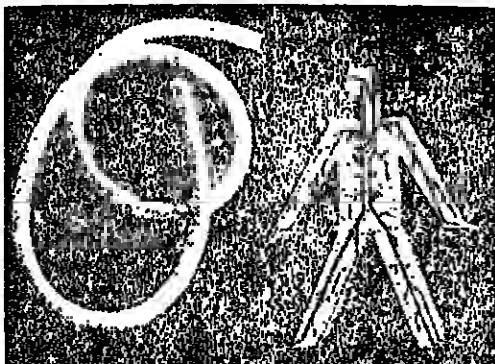
#### THE VOLGA UNDER SCRUTINY

It was decided to set up a research institute for the Volga River, the first in this country. It is, TRUD writes, to study and summarize the environmental impact within the Volga basin, and to work out recommendations for various research and planning authorities.

Soviet specialists, the newspaper stresses, believe that it is impossible to save the beauty and purity of the river

## REPAIRS FOR BLOOD VESSELS

Doctors put great hopes on the spiral-shaped plastic tube. Photo shows an artificial blood vessel which can be used to replace a damaged one in the human body. Scientists everywhere are indefatigably looking for ways to cure people from cardiovascular diseases — ailments of the heart and blood vessels. Today, surgery has



proved highly efficient in the treatment of both. Many previously impossible operations on the blood vessels have now been made possible by Soviet specialists who have designed artificial blood vessels, the patents for their manufacture of which have been purchased by many countries. They have also designed many original methods for examining the cardiovascular system, including ultrasonic echocardiography. Heart surgeons have saved the lives of hundreds of thousands of patients, thereby bringing them back to gainful employment or, as the surgeons themselves put it, improving the quality of their patients' lives.

In recent years, angiology has asserted itself as another important and promising aspect of medical science. It deals with the study of cardiovascular diseases. The USSR has already set up more than one hundred angiological centres. Prevention of vascular diseases and their treatment by means of medicines and surgery constitute the main direction in the work of such centres.

The other picture was taken by our correspondent at one of the centres in Tbilisi, the Georgian capital. Surgeons are performing one of the most complicated operations on blood vessels. Special colour television screens make it possible to follow the course of the operation and video tape recorders — register it. Later these recordings will not only make it possible to analyse the techniques of surgery, but will also serve as splendid educational aids for doctors improving their skills at the centre.

In the near future this Angiological Centre will open its branches in Sukhumi, Gdoutsi, Telavi, Tskhinvali, and other places in the Georgian Republic.

### Clean air for Minsk

Cannulons and roses have been harvested in the plantations adjoining the foundry of the Minsk tractor works, Byelorussian capital's largest enterprise. New technology has been introduced here which has sharply reduced the outburst of dust and other wastes into the atmosphere. The flowers which are sensitive to air pollution

now look fine. The building of a principally new gas purification installations and "clean" technologies is provided for by the comprehensive ecological programme now in effect at the works. During the first six months of 1984 alone the enterprise spent about one million roubles for anti-air-pollution measures.

The people living near the works have already felt the effect of their subjective reactions being confirmed by the monitoring laboratory registering a steep pollution content drop in the air, water and soil.

Minsk now has one of the cleanest air spaces in the locality. The local authorities have prepared a plan for taking certain enterprises beyond the city line.

### Unique steel smelter in the making

Adjustment and welding works have begun on the project of the Oskol steel-making complex, the steel-smelting shop. The steel-making furnace will have the hot gas mode.

The local electric smelting facilities form a complex incorporating modern technology for blast-coal production of steel. The complex also comprises a 110 kV power line, enabling it to accelerate steel-smelting process times. The whole power is completely automated at remote pollution facilities provided.

The final furnace is expected to produce 362,000 tonnes of steel using the blast-furnace method.

### New machine test from Kharkov

The Kharkov machine-making association, in Ukraine, greatly reduces the time for testing of a new machine, as the last two-week complex control microprocessor has been put into operation. Unlike other automatic control systems, the new control through programming of the machine operations and its monitoring functions.

To switch the complex new task, the operator only has to key in the code number of a workplace and the code it is to be made of. The computer will program operations no matter how complex the workplace is. It also offers several rapidized on a display. The operator also controls the speed of the robot feeding with a remote control device from a storage control equipment involved in the work.

This first robot-attended plant will be dispatched to the Krasnodar Krai, to the Krasnodar tractor works. Before the end of 1985 the Kharkov machine-making plant will produce a dozen robot-attended machine tools controlled by a computer.

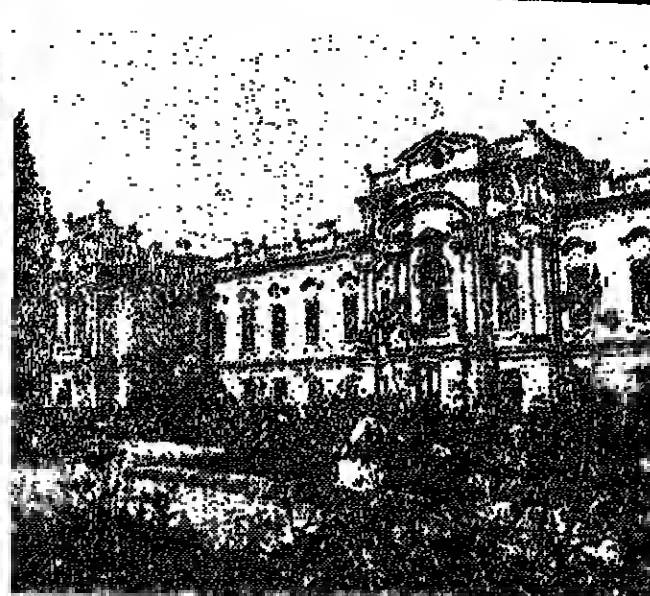
### Places to visit

## The Blue Palace

The Marinsky Palace is a two-story building in an elegant, neoclassical style. Looking extraordinarily light, it is one of the architectural pearls of Kiev erected more than 200 years ago.

Even if you know nothing about architecture you will see that its sister among the city architectural treasures is the Andreyevskaya Church designed by the Russian architect Vasily Stasov (Bartolomeo) Rasnitsin. He built both the palace and the church.

In 1810 the upper wooden storey caught fire. Only two side wings and the ground brick



floor remained. In the 1830s the ruins were cleared, the ground floor was covered with a roof, and water-cure baths were opened which caused irreparable damage to the building. Only fifty years later was the palace restored under the guidance of Academician Karl Mayevsky. He revived the facade in Rasnitsin's style. As for the interiors, they were decorated according to the 19th-century style.

The interiors are richly ornamented with sculptures. The central pediment is decorated with two female figures, one symbolizing Justice and the other — Mercy.

### Textbooks in 52 languages

School textbooks lead, by the number of copies, in the total volume of publications. In the USSR, this is hardly surprising considering the large scale on which education is carried out in the country (about 45 million pupils and more than 140 thousand secondary schools), the obligatory secondary education for young people and the multilingual character of Soviet schools.

There are more than one hundred nations and nationalities in the USSR, some with populations counted in tens of millions (Russians, Ukrainians, etc.) — only in several hundred people. Hence the varieties of the Russian ABC book to only several copies of its edition for the children of the Commander Khabarovsk numbering only 500 people.

In some schools of the Union republics teaching is done in the native languages; altogether

school textbooks are published in 52 languages.

For example, in Uzbekistan teaching in schools is done in the Uzbek, Russian, Kazakh, Tadzhik, Turkmen, Kirgiz and Kara-Kalpak languages and usually textbooks are published in each of these languages.

Considering the fact that about 120 titles of textbooks are published in the USSR for secondary schools (which teach children the fundamentals of almost twenty natural and humanitarian sciences, world history and literature) and in numerous languages of Soviet nationalities, then it is understandable why 140,000 million copies of textbooks (they are distributed free of charge among the pupils) were printed in the USSR by the beginning of the school year.

At present the USSR has started a large-scale school reform, an important factor of which is further improvement of the entire teaching process, including writing of new and better textbooks and aids.

### GLACIERS THAW IN CENTRAL ASIA

Major rivers in Tajikistan have overflowed their banks because of large-scale thawing of glaciers caused by a protracted February in August. The Vakhsh and the Pyandzh, feeding Central Asia's largest river, the Amudarya, have been receiving 30 per cent more water than usual.

Hydrogeologists, after having flown over mountain ridges and valleys covered by snow and glaciers, have found that water flowing from the mountains has always been sources of trouble and worry. However, this time specialists believe, the critical threshold won't be reached, as the water is being accumulated in the reservoirs along the banks of the Amudarya. The pond in front of the Nurekaya dam has received hundreds of millions of cubic metres more water, thus creating more electric energy to be produced for the South-Tajik production complex and for the energy of Central Asia.

### Turkmen cotton

A very hot summer notwithstanding, Turkmen farmers, in Central Asia, have grown a bumper harvest. Cotton is especially good in the area of the Karakum Canal, accounting for half the fields allotted to Turkmenia for cotton. The acreage of fine-fibre varieties grown with every passing year. This year Turkmenia intends to sell the state over 1,240 tonnes of cotton.



### Planets given names

It has now become traditional that minor planets receive names suggested by those who discovered them. Not so long ago a message was received at the Leningrad Institute of Theoretical Astronomy from the Central Bureau for Astronomical Telegrams authorizing the naming of 20 new planets discovered by Soviet astronomers.

The first planet was called Bulgaria. The others are named after O. Mikhov, Corresponding Member of the USSR Academy of Sciences; Academician D. Likhachev, known for his research into Russian history; famous Russian writers and poets Nekrasov, Gorky, and Mayakovsky; Lesya Ukrainka, the celebrated Ukrainian author; Planet No. 2949 was named after the late Alexander Kaverznev, the famous Soviet TV commentator.

### Alligators to get preferential treatment

The Central Asian Karakum Desert has been chosen by Soviet zoologists for raising the unique reptile — the Chinese alligator. It is decided to put this pigmy crocodile (less than 1.5 m long) in one of the country's southernmost zoos in the Turkmenian capital Ashkhabad.

These kindly creatures hunt slow fishes, molluscs and crustaceans and never attack anyone on land or less than 200 m away from the Yangtze river basin being their only habitat.

If crocodile tears exist at all, they must be shed by alligators lamenting their fate. Chinese al-

### Science and technology

#### MAN-MADE LUNG

Soviet specialists have come up with a new blood oxygenator — man-made lung. The majority of artificial lungs now in use belong to the so-called contact type oxygenators in which the blood receives oxygen sprayed within its media. This usually results in the subsequent formation of thrombosis hazardous to the life of a patient. Other disadvantages include the need for a donor's blood, the danger of gas bubbles (which can block tiny cerebral vessels forming in the blood stream, etc.).

The majority of these disadvantages have been overcome in the new Soviet membrane oxygenator MGS-122. In it, the blood, like in a human lung, does not come in contact with the gas medium. In the lungs, erythrocytes become enriched with oxygen via the walls of thin capillaries substituted for by membranes in the new man-made lung, thus eliminating most health hazards.

#### VISION FOR COMPUTER

An electronic computer may distinguish colour and shape when equipped with an organ of vision designed by Tajik scientists, Central Asia.

The idea ripened during observations of celestial bodies. The fact is that even the best of photodiodes and precision instruments fail to replace the human eye. Thus, for example, cannot immediately respond to variation in the luminosity of comets and their flight distance. However, this is very important for studying very fast processes taking place inside celestial bodies and changing their shape. A solution to this problem lies in a perfect device operating in combination with a telescope and a computer, and capable of adapting itself to all changes in real time. A functioning model of the human eye was designed, having the same refractory index and other parameters characteristic of living matter. The device comprises light guides transmitting the image to a TV display. The new model simulates all changes pertaining to reflectivity and the formation of images.

### VIEWPOINT

#### Passenger transportation in the USSR: successes and drawbacks

Alexei DUMOV

Public transport plays a great role for the Soviet people that it does for the people of many other countries.

The main distinctive feature of Soviet public transport is low fares. In cities, a tram, trolleybus or an underground ride costs, as a rule, between three and five kopeks (four to seven US cents), regardless of the distance. The fares have not changed for the past three decades, whereas its maintenance and development costs have been constantly growing. That is why the state has to make annual allocations of more than two thousand million roubles to this sphere.

The fares on interurban railway, river and air lines are also several times lower than in the capitalist countries. This means that the expenditures on transport in the USSR are much lower than in many other countries.

It may be recalled that in countries where motor industries are developed, with one car for every three to four persons, the automobile infrastructure requires colossal financial, material and human resources. In the Soviet Union this expenditure is considerably lower. Out of a population of 275 million only ten million have cars of their own. Every year, 1.3 million new cars roll off the assembly lines at Soviet motor works making a steady increase in the fleet of private cars. At the same time, experience shows that most people, particularly in winter, prefer to use public transport which carries nearly 200 million people in the country daily.

A short while ago, the CPSU Central Committee adopted a decision, "On Further Improvement in Passenger Transportation".

The decision notes the positive aspects of transport services provided for the population. Over the past few years, all the constituent republics, territories and regions have commissioned new railway lines and urban and rural transport routes. The rolling stock has been replenished with new modern railway carriages, buses, trolleybuses and trams.

Particularly spectacular is the growth in passenger transportation by underground railway systems. In 1970, their length exceeded more than 2.5 thousand million passengers but this figure increased to more than 4.1 thousand million in 1983.

Rapid growth has also been observed in the airline traffic. In 1970, the number of air passengers was 71.4 million. In 1983 it reached 109.6 million. The reason for this rise lies in the growing mobility of the Soviet population caused, among other things, by rapid development at new areas in the North, Siberia, and the Far East.

At the same time the decision states that there are serious drawbacks in the organization of transportation. In summer, passengers are faced with all sorts of difficulties and complications, particularly when travelling by railway. In some places, city transport is operating with strains. Often buses, trams, trolleybuses and underground trains are overcrowded, and the schedule for their operation is not properly observed.

The CPSU Central Committee has made it binding on all enterprises and departments responsible for the operation of passenger transportation to remove the shortcomings pointed out in the decision.

### Fashion news from Georgia

Fashion designers from Georgia offer a wide range of models for young people — in total 140 models of dresses, suits, and overalls every year. They are using fashionable silhouettes and popular range of colours, elements of folk costumes, national embroidery patterns and decorations of beads and silver.





## Theatre, Cinema and TV Stars

## ANATOLY SAFIULIN

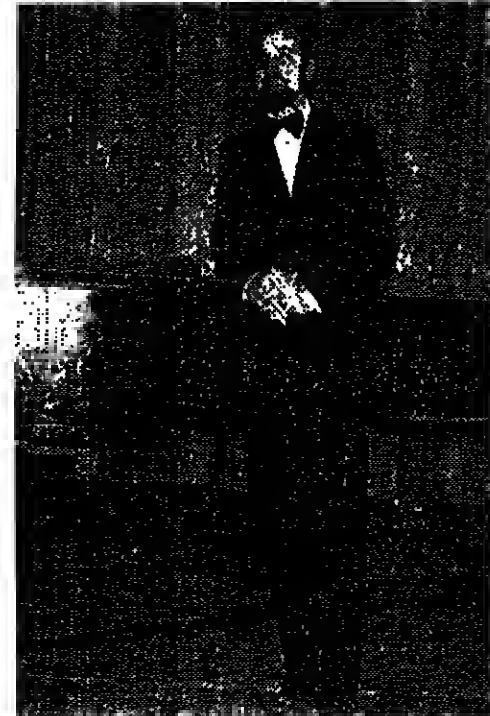
At the Grand Hall of the Moscow Conservatoire Beethoven's Ninth Symphony was being played. "Embrace, millions," the sounds came from the stage. The music and the performers were excellent. One of the soloists attracted particularly great attention. He had a beautiful timbre and excellent delivery, and one got the impression the man himself was music.

It might seem that he had had no other choice apart from music. However, when he was a youth, Anatoly did not even think about art or professional singing. At 10 he became a fitter. It was only in the army that he began to sing with a small orchestra. He later became a student of the Moscow Gnesiny Music School and at the same time began to work with the Russian Song Choir of the USSR Radio Network. During his third year at the school he sang in the chamber choir led by Vladimir Malin. His dream came true several years ago when he became a soloist with the Moscow Philharmonic Society.

What does this mean? Frequent tours, visits to cities, towns and villages. Concerts on the best stages, in factory workshops and on fields. The repertoire: Arias from operas, romances, folk songs, and parts in oratorios, that is, all genres.

Anatoly Safiulin has a rich repertoire. His inimitable part is his big cantatas and oratorios, the most difficult genres in vocal art. Normally, there are only a few rehearsals before a concert. Within a brief period it is necessary to understand everything hidden in the score. The main work involved in such music is carried out by the singers themselves. Anatoly says. We come to rehearsals with a conductor, even more with an orchestra, then we are well prepared. For the choir, orchestra and other soloists to make a fine ensemble, we must be professionally and technically well trained. Big works create the strongest emotional impressions upon audiences, of course, on the singers too.

His beautiful, "velvety" bass sounds equally well when he sings arias, Russian folk songs and romances. He has prepared an interesting programme called "On Quixote and Melancholy". Forces of good and evil were counterposed in it, contrasting vividly in the music.



of Iber, Massenet and Ravel. Recently he sang romances by Tchaikovsky, Rachmaninov, Musorgsky and Sviridov in Leningrad, and that evening he provided his audiences with an opportunity to follow the long path in the development of the genre. Now continuing it, the singer has decided to prepare a new cycle, "From Glinka to Dargomyzhsky", which is expected to take several seasons.

I love to sing and to travel, Safiulin says. My concerts have taken me to different corners of the world. All this gives a host of impressions and opportunities to learn. I try to reflect in the music I sing everything I see.

Alexandre EGIZARYAN

## UKRAINIAN-SWISS CO-PRODUCTION SOON

Work has started on a new act-II film, "Beyond Time" to be shot by Kiev Dovzhenko Studios (the Ukraine). The film was ordered by Falcon Film and Aris Production of Switzerland, who will also take part as co-producers.

The film conveys the story of Gendava, a wonderful country. It shows scientists who found a 200-tonne golden sphere on the ocean bed, which was believed to be a part of an ancient temple built by an unknown civilization which ceased to exist 900 million years ago as the result of a nuclear catastrophe.

The Dovzhenko Studios are responsible for building the set recreating Gendava, a very complex project which is to be completed in a very short period of time, as shooting begins early next year.

Kiev specialists have already

had the experience of building large-scale sets for films, including Soviet-Polish co-production, "Pilot Pirxle". Juan Antonio Bardem, a noted Spanish director, shot there the central scene, the "Reichstag Fire", for his film about Georgi Dimitroff, "The Verdict".

## 'This Was in 1945'

A publicistic film, "This Was in 1945", tells about the humane mission of the Soviet officers who were appointed commanders of German cities and towns in the victorious spring of 1945. This film is being made by the Leningrad Documentary Studios and is dedicated to the 40th anniversary of victory over fascism.

Our film depicts the difficult period when the foundation of

lature socialist Germany was being laid in the ruins of the Nazi Reich, says film director Yu. Zaitsev. Soviet soldiers did not come to the land of the aggressors in order to take revenge. They realized that Hitler's come and go but the German nation remains. One of the chief characters in the film, Colonel in retirement Nikolai Kharlamov, a former commandant of Lühben, opened an orphanage for German children, and this orphanage still bears his name and he still receives many letters from the GDR. Other commandants also maintain correspondence with friends in the sister republic. They have left good memories in Germany.

The team will visit Berlin, Weimar, Potsdam, will meet anti-fascists who fought against Nazis in the underground. One of the episodes will revivify the efforts of the Soviet soldiers to save the invaluable paintings of the Dresden Gallery. It is known that the paintings were returned to the German Democratic Republic after their restoration in the USSR.



The Soyuzdetfilm Studios are working on the animated cartoon, "Hercules and Admetus", which is an ecology of human life and self-sacrifice. The Greek myths are adopted for the film by Anatoly Petrov. The artists drawing the film have studied and adopted ancient Greek pictures.

In the photo: a still from the film.

## 'Berlin Gives Best Regards to Moscow'

1,200 actors and musicians from the GDR will be performing in Moscow and other Soviet cities during the Days of Culture to be held in the USSR on October 10-19.

The press was told this in Berlin by Dietmar Keller, Deputy Minister of Culture of the GDR. The days are devoted to the 40th anniversary of the victory over fascism and to the 35th anniversary of the formation of the GDR, he said. The days will be started by a gala concert in the Bolshoi Theatre by singers of the Dresden Op-

era, the state dance ensemble, the Berlin radio choir and other famous musical companies of the republic. "Berlin Gives Best Regards to Moscow" will be the title of a variety show at the State Central Concert Hall in Moscow. The days will also feature a fair of the Gorky Berlin Drama Theatre and of the Dresden Opera Theatre, new DEFA films, exhibitions of GDR artists, a show of Massenet films, meetings of GDR and Soviet writers and composers. GDR performers will also go to other Soviet cities.

## A HUNDRED YEARS LATER

Slightly less than one hundred years have passed since the first-night performance of the ballet, "Salonika or Love in Hell" which has again seen the light of the stage in the theatre, Vanemuine in the Estonian city of Tartu.

This ballet by the French composers F. Benoit and H. Reber is more than 140 years old. In the history of Russian choreography it is known for the fact that it was first produced under the title, "La Diable

announced" by Marius Petipa when he migrated to Russia in 1847.

The resort of the Estonian ballet-dancers to this ballet is explained in terms of the growing popularity of artistic creations of the past. The "rebirth" which has become popular in the theatre and cinema, is now spreading to old choreography which attracts, with its ancient naïveté, profoundly romantic feelings, and the strict classical character of the dancing.

The celebrated Indian dancer Uma Sharma (in the photo) consults the young member of the White Lotus ensemble, Angelina Mironova. The ensemble was set up at the Mayak Palace of Culture in Moscow two years ago. It has sixty members aged between 12 and 25 who are schoolchildren, college students and workers. They dance folk and classical Indian dances.



## WHAT'S ON!

September 18-21

## THEATRES

Bolsbol Theatre (Sverdlov Sq.). Guest performances by the Malybayer Opera and Ballet Theatre from Kirghizia. 18, 20 — Bollo, "Mephistopheles" (opera). 19 — Moldobasanov, Okunev, "Kulchuk" (ballet). 21 — Rukhverger, "Cholpon" (ballet).

Sizislavsky and Nemirovich-Danchenko Musical Theatre (17 Pushkinskaya St.). 21 — Rimsky-Korsakov, "May Night" (opera). 21 — Mantulinskaya St. Metro Ullisa 1905 Code.

Oporetta Theatre 16 Pushkinskaya St. 18—A concert of Strauss' melodies. 20 — Kaiman, "Evening Visitors". 21 — Kolman, "The Gypsy Princess".

Obreztov Puppet Theatre (3 Sadovaya-Samotchnaya St.). 19—Poplavtova, "The Process and the Echo". 20 — "This is the Central Puppet Theatre. Broadcasting". 21 — "Aa Unusual Concert".

## FILMS

The Shipping World (Mosfilm Studios).

## BUSINESS

## Sogecred at 'Lesdrevmash-84'

At "Lesdrevmash-84", an international exhibition now on in Moscow, a number of Italian firms and the Buckeye company of the USA are represented by the Sogecred company of Switzerland.

The exhibition is of great importance for us, an MNI correspondent was told by Mauro Manfredi, deputy director of the SNIA BPD Moscow office. Jointly with Buckeye we are displaying a project for a major cellulose plant to be built in the Mordvinsk Autonomous Republic on a turn-key basis. Leaf-bearing trees which are to be used are less expensive than coniferous trees usually used for the purpose. Therefore this firm one of the main lines for our cooperation with the USSR State Committee for Science and Technology. We have carried out joint tests and exchan-

ged data. The project in question is a specific example of our sound business contacts.

After the exhibition is over a team of specialists from the SNIA BPD and Buckeye will go to Bratsk, Irkutsk and other Soviet cities having cellulose production. Later Soviet experts will go to the USA to learn about production facilities based around Buckeye technology.

We hope that the project we have designed will be approved by the Soviet side and that we shall take part in building both the plant and the town which will spring up around it.

Before the end of the exhibition the companies Castoldi, Conini, Impla, SNIA BPD and Buckeye will arrange symposiums on cellulose production, wood-working and other related subjects.

## 'TECHNOLOGY DAYS' IN RIGA

For the second time in ten years Praginvest, in conjunction with CKD-Praga, is organizing "Technology Days" in the Latvian capital, Riga.

Citizens of Riga know very well the nice-looking and convenient trans made by CKD-Praga. For many years Latvian

railway car builders have been competing with their Prague colleagues, engineers of the Baltic railway machine Czechoslovakia. The show features truck cranes, equipment for manufacturing building materials, ceramics, diesel locomotives and generators.

The Rauma-Repolo company of Finland has mounted a large display at the "Lesdrevmash-84" international exhibition for wood-working technology. It shows its processes for making wood-particle boards, wafer chips and for wood pulping, etc.

"We have been doing business with the Soviet Union already for 15 years," Aaro Laakkonen, Rauma-Repolo's sales manager said in an MNI correspondent. "At the present time we are delivering to your country 26 complete factories. Since 1962, Soviet Praginvestimport alone has signed contracts with us worth 180 million rubles." In the photo: Aaro Laakkonen (centre) with Soviet specialists.

Patrasovsk. Portraits and series of pictures under the title "My Heroes" are on show. Daily, except Monday, 11 a.m. to 6 p.m. Metro Aeroport.

## CONCERT HALLS

Concert Hall of the Central Tourist House, 1145 Leningrad Prospekt. 18, 19 — Song and humour evening, featuring Zaur Totov and other variety performers.

Central Concert Hall (11 Moskovskaya Embankment, at the Rossia Hotel). 18, 19 — Chenna Bichevskaya solera.

## SPORTS

CHIESS  
Hall of Columns, House of Trade Unions 11 Pushkinskaya St. 18-21 — World title match Anatoly Karpov (USSR) vs Garry Kasparov (USSR). 5 p.m. (every day).

3rd and 6th games are to be played on September 18 and 21.

FOOTBALL  
Dynamo Stadium. 19 — Dynamo (Moscow, USSR) vs Hajduk (Split, Yugoslavia). 7 p.m. A final leg match for the European Cup. Holsters champions.

ship. The second leg will be played on October 3, in Yugoslavia.

## BANDY

Olimpiyskiy Sports Complex (Metro Prospekt Mira). 18-20 — USSR Cup. 6 p.m. and 8 p.m. (every day).

## VOLLEYBALL

Izmailovo Park of Culture and Rest. 18-21 — Moscow outdoor cup. 6.30 p.m. (every day).

## RACING

Hippodrome (22 Begovaya St.). 19 and 21 — Flat racing and trotting. 6 p.m. (both days).

## WEATHER

September 18-21

S winds will warm up the air to 17°, 21°C to Moscow, city and region. Possibility of short rains in the west of the region.

Warm and cloudless weather will settle over most parts of European USSR, except for 18°, 24°C in its western and central regions.

## Cooperation on the railways

Poland is the biggest Soviet partner in the field of railway traffic. Thus, last year alone, the traffic of goods intended for Poland was 10,968 thousand tonnes, and another 19,468 thousand tonnes were conveyed from the Soviet Union to other destinations via Poland's railways. These figures continue to grow.

Therefore Nikolai Konarev and Janusz Kaminski, the two countries' railway transport ministers, have had much to discuss at their last meeting in Moscow. The accompanying Polish delegation was given the opportunity to learn about the operation of various Soviet railway services.

The negotiations underscored the need for more contacts between research and operating units, more so that a certain experience in this field has already been gained. Particularly successful was the joint project to build a railway between the Vladimir-Volynsk — Hrubieszow frontier point and the Kalowice metallurgical combine. The 297 km branch has streamlined the supply of Soviet iron ore to the Polish furnaces and of the Polish coal, sulfur and other cargoes to the Soviet Union. The USSR in this venture was responsible for various machinery, rails and sleepers, and built a bridge across the Bug River. Work now continues on the modernization of the Best, Chernyakhovsk, Svislach and Dzerzhinskaya Novaya stations.

The ministers also agreed on Polish construction organizations building and reconstructing railways in the USSR.

Vladimir SINEDUBSKY

## Leipzig fair ends

The traditional autumn international Leipzig fair has ended.

The USSR and the GDR showed many exhibits this year particularly. Trade and economic relations between the two countries are developing dynamically.

During the fair the USSR and the GDR signed a 6,000 million ruble worth of trade contracts.

## Mutual trade grows

The Austrian press carries reports of a significant expansion of Austria's trade with the USSR. Export to the Soviet Union has grown considerably. In the first half of 1983 it grew by 38.8 per

cent, that is by 7,200 million schillings. Austria increased its export of machines, industrial equipment, vehicles, etc., as well as its import of energy fuels from the Soviet Union.

## Intourist news

## TOUR OF SEVEN CITIES

We have come to the Soviet Union to see, besides Moscow, the sights of Volgograd, Tbilisi, Sochi, Kiev, Vilnius and Leningrad. These are big cities situated in different climatic zones in the country's south, west, and Baltic area. Volgograd is a specific attraction for us, we heard so much about its heroic defence during World War II. The weekly tour of our group are people of different occupations—teachers, doctors, and workers from Sydney, Queensland and two states in South Australia.

We started our tour of Moscow with a visit to its environs, the capital's so-called green belt. Moscow is a city full of greenery. Today we visited the Lenin State Library, one of the world's biggest book repositories.

A cocktail party organized for us by Intourist was a pleasant surprise. This is not my first visit to the USSR. I attended the Moscow 1980 Olympics. The opening ceremony of the Lenin Stadium in Leningrad was an imposing spectacle. At the end I would like to share my impressions about

meeting a Muscovite, whose name I don't know—when I lost my way and the trolleybus carried me I don't know where. She showed me the way to the hotel and even accompanied me. In Moscow I saw your paper on sale at a newsstand, for me it looked like an old friend. In Australia it is very popular with people, who are interested in life in the Soviet Union.

Yelonn KHANGA

In the photo: Tony Hickman in front of the Moscow Friendship House.

**SOVINCENTR**

The Centre for International Trade invites you to Days of Azerbaijani Cuisine to be held here from September 23 to October 10.

Mercury restaurant and the Atrium and Mall bars will offer you, with exceptional Oriental hospitality, the pick of Azerbaijani cuisine. Moreover, from 9 o'clock p.m. the restaurant will entertain you with the Gyalistan floor show.

**Come to us to enjoy Oriental pleasures!**

For further information please dial 253-27 60 or 253-27 63

Address: Moscow, 12 Krusovskaya Embankment

## Clean room symposium

Clean rooms in which dust is virtually eliminated have become a very important element in several technologies, especially in the electronics industry. The dust-free environment is ensured by very complex equipment, and special non-dustable materials used in building the walls, floors and ceilings.

In the process of building through the floor. All the structures, including back-draft doors, were supplied by the Thermo company, known in the USSR for its low-temperature storage.

Speakers for the two completed talked about the suitability of their clean rooms to medicine, pharmaceutical and other industries.

## Contacts and contracts

The USSR Civil Aviation Minister, Boris Bugayev, has held talks with Hungarian Transport Minister Lajos Urban during which satisfaction was expressed with the cooperation between Aeroflot and the Hungarian airline, MALÉV. The two Ministers also discussed questions of further development and expansion of cooperation in the area of civil aviation.

An international engineering fair in which 2,500 firms and foreign trade organizations from 29 countries are taking part, has opened in Brno, Czechoslovakia. Soviet foreign trade organizations traditionally show the biggest display.

